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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/615,996

07/08/2003

Tsuyoshi Yamamoto

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1047

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EXAMINER

HALEY, JOSEPH R

ART UNIT

PAPER NUMBER

2653

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/615,996

Applicant(s)

YAMAMOTO ET AL.

Examiner

Joseph Haley

Art Unit

2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The I.D.S. filed on 7/8/03 has been considered by the Examiner. However, the Japan and/or other foreign documents, if they have not been written in English, are considered to the extent that could be understood from the English abstract and drawings.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The applicant states in claim 10 "a method according to claim 8". It is unclear how this method claim corresponds to the apparatus limitation of claim 8.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 6, and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park (US 6842414) in view of Funada (US 4730294).

In regard to claim 1 Park teaches a tilt control method for controlling the tilt, with respect to an optical disc, of an objective lens in an optical pickup for recording or playing back signals through the objective lens, comprising: a tilt control circuit for controlling the tilt of said objective lens by controlling the amount of current to a tilt adjustment coil (fig. 1 element 110); and a focusing control circuit for adjusting the focus of the objective lens by controlling the current to a focusing coil (fig. 1 element 108); a preprocessing procedure comprising the steps of: detecting, at least at two different positions along a radial direction on the optical disc during recording or playback of signals to or from said optical disc, a DC voltage value from a focusing drive signal that is supplied to said focusing coil (fig. 2 see also column 5 lines 20-25); and obtaining from respective detected DC voltage values a relationship between a position on said optical disc where recording or playback is being performed and the DC voltage value of said focusing drive signal (column 5 lines 13-19); actual recording or playback procedure comprising the steps of: obtaining a DC voltage value corresponding to a recording or playback position during recording or playback of signals to or from said optical disc (column 5 lines 13-19), however Park does not teach controlling the amount of current that is supplied to said tilt adjustment coil on the basis of a signal in which the obtained DC voltage value is added to an AC signal included in the drive signal that is supplied to said focusing coil at the time.

Funada teaches controlling the amount of current that is supplied to said tilt adjustment coil on the basis of a signal in which the obtained DC voltage value is added to an AC signal included in the drive signal that is supplied to said focusing coil

at the time (see column 1 lines 27-32 and lines 62-66. While Funada does not teach this in a tilt coil it establishes that controlling a coil using a dc offset from an error signal is well known in the art).

The two are analogous art because they both deal with the same filed on invention of optical recording medium.

At the time of invention it would have been obvious to one of ordinary skill in the art to provide the apparatus of Park with the control of Funada. The rationale is as follows: At the time of invention it would have been obvious to provide the apparatus of Park with the control of Funada because it is a well known and effective way to compensate for an error signal.

In regard to claim 2, Park teaches in said preprocessing procedure, at two positions of inside position and outside position on the optical disc, the DC voltage of the focusing drive signal is detected, and said relationship is obtained from the detected result (fig. 2 see also column 5 lines 26 and 55).

In regard to claim 3, Park teaches said inside position is the innermost position that can be recorded or played back on said optical disc, and said outside position is the outermost position that can be recorded or played back on said optical disc (fig. 2).

In regard to claim 6, Park teaches a recording or playback position of signals for said optical disc is detected on the basis of positional information that has been recorded on said optical disc (address information on an optical disc is inherent).

In regard to claim 8, Park teaches a control apparatus for an optical pickup for performing recording or playback of signals by emitting light onto an optical disc from

an objective lens, comprising: a tilt coil for adjusting the tilt of said objective lens (fig. element 110, it is inherent there is a tilt coil); a focusing coil for adjusting the focus of light from said objective lens; a position detecting apparatus for detecting the recording or playback position along a radial direction with respect to said optical disc (fig. 1 element 108); a relationship storage section for storing the relationship between the radial position detected by said position detecting apparatus and a DC component of said focusing drive signal, and outputting said DC component corresponding to the detected result of said position detecting apparatus (column 5 line 55, Park teaches subtracting the tilt from the inner circumference from the tilt on the outer circumference there must be somewhere to store these values); an AC component extractor for extracting the AC component from the focusing drive signal for controlling the focus of the optical pickup (fig. 1 element 108), however Park does not teach a tilt control circuit for adding said DC component that is output from said relationship storage section and said AC component that is output from said AC component extractor, and controlling the tilt of the optical pickup by controlling the current of said tilt coil on the basis of the obtained addition signal.

Funada teaches a tilt control circuit for adding said DC component that is output from said relationship storage section and said AC component that is output from said AC component extractor, and controlling the tilt of the optical pickup by controlling the current of said tilt coil on the basis of the obtained addition signal (see column 1 lines 27-32 and lines 62-66. While Funada does not teach this in a tilt coil it establishes that controlling a coil using a dc offset from an error signal is well known in the art).

In regard to claim 9, see claim 6 rejection above.

Claims 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park in view of Funada further considered with Official Notice.

In regard to claims 7 and 10, Park and Funada teach all the elements of claim 7 except a recording or playback position of signals for said optical disc is detected according to revolutions of the motor moving said optical pickup.

Examiner takes Official Notice that systems that detect the position according to the revolutions are well known in the art (CAV or constant angular velocity systems).

At the time of invention it would have been obvious to one of ordinary skill in the art to provide the apparatus of Park with the control of Funada and a CAV system. The rationale is as follows: At the time of invention it would have been obvious to provide the apparatus of Park with the control of Funada and a CAV system because it is a well known and useful system in the art.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park further considered with Official Notice.

In regard to claim 4, Park teaches all the elements of claim 4 except in said preprocessing procedure, at three positions of inside position, outside position, and intermediate position on the optical disc, the DC voltage of the focusing drive signal is detected, and said relationship is obtained from the detected result.

The examiner takes Official Notice that using three positions instead of two would be obvious to one of ordinary skill in the art because it would allow for more accurate detection of tilt.

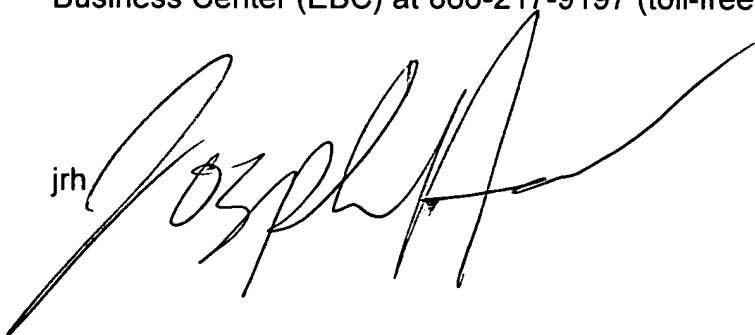
In regard to claim 5, Park teaches said inside position is the innermost position that can be recorded or played back on said optical disc, and said outside position is the outermost position that can be recorded or played back on said optical disc (fig. 2).

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Haley whose telephone number is 571-272-0574. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on 571-272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jrh 

  
TAN DINH  
PRIMARY EXAMINER

1/06/08